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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,149	12/15/2003	Young-Dong Nam	SAM-0476	6342

7590

05/20/2005

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EXAMINER

LE, JOHN H

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EC

Office Action Summary	Application No.	Applicant(s)	
	10/737,149	NAM, YOUNG-DONG	
	Examiner	Art Unit	
	John H. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 3 is objected to because of the following informalities:

Regarding claim 3, this claim has no transitional phrase such as “comprising”, “consisting essentially of”, and “consisting of” define the scope of a claim. Therefore, the metes and bounds of the claim cannot be readily ascertained (See MPEP 2111.03).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mollenkopf et al. (USP 6,377,786).

Regarding claim 1, Mollenkopf et al. teach a filter characteristic measuring method (e.g. Col.8, lines 20-44), comprising the steps of: generating an impulse signal (e.g. Col.8, lines 29-31); applying the impulse signal to a DUT having an analog filter through a digital channel (analog filter is internal to wide-band power meter 236); and measuring a gain of the analog filter in the DUT and a frequency characteristic by using an output of the analog filter (e.g. Col.8, lines 35-43, Col.15, line 60-Col.16, line 10).

Regarding claim 4, Mollenkopf et al. teach system for measuring a characteristic of a filter in a DUT employing an analog filter (e.g. Col.8, lines 20-44), said system comprising: a digital channel (wide-band power meter 236) for providing an impulse signal without applying a sine wave to the analog filter (e.g. Fig.2, Col.8, lines 20-44); a digitizer (power measuring digital filter 234) for receiving an output signal of the analog filter so as to measure the characteristic of the filter (e.g. Col.8, lines 35-43); and a controller (117) for controlling the digital channel and the digitizer (e.g.Figs.1-2, Col.56-61).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mollenkopf et al. (USP 6,377,786) in view of Nevin (USP 5,357,257).

Regarding claims 2-3, Mollenkopf et al. fail to teach the analog filter is an equalizing filter, and then an output response of the equalizing filter is obtained and a differential and a fast Fourier transform (FFT) operation therefore are performed so as to measure a boosting gain and a frequency response.

Nevin teaches the analog filter is an equalizing filter 130A, and an impulse signal is applied to an equalizing filter by using a digital channel 1 of an

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automatic tester, and then an output response of the equalizing filter is obtained (e.g. Fig.1, Col.3, lines 56-66) and a differential and a fast Fourier transform (FFT) operation therefore are performed so as to measure a boosting gain and a frequency response (e.g. Figs.2-3, Col.5, lines 48-56, Col.8, lines 44-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an equalizing filter and a fast Fourier transform (FFT) as taught by Nevin in a filter characteristic measuring method of Mollenkopf et al. for the purpose of providing an improved apparatus and method for equalizing the channels in a multi-channel (Nevin, Col.2, lines 41-47).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mollenkopf et al. (USP 6,377,786) in view of Kameda et al. (USP 6,631,341).

Regarding claim 5, Mollenkopf et al. fail to teach the digitizer comprises: an anti-aliasing filter for antialiasing-filtering an output of the filter; an analog to digital (A/D) converter for converting a filter output outputted from the anti-aliasing filter into digital data; a memory for capturing the digital data outputted from the A/D converter at a determined storage region; a digital signal processing (DSP) for processing in signal the digital data captured at the memory.

Kameda et al. teach signal analyzing including an anti-aliasing filter (9) for antialiasing-filtering an output of a filter; an analog to digital (A/D) converter (10) for converting a filter output outputted from the anti-aliasing filter into digital data; a memory (11) for capturing the digital data outputted from the A/D converter at a determined storage region; a digital signal processing (DSP) (13) for processing in signal the digital data captured at the memory (e.g. Fig.1A, Col.6, lines 38-47).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an anti-aliasing filter, an analog to digital (A/D) converter, a memory for capturing the digital data, and a digital signal processing as taught by Kameda et al. in a filter characteristic measuring method of Mollenkopf et al. for the purpose of providing a method for analyzing signal.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Le

John H. Le
Patent Examiner-Group 2863
May 16, 2005

John Barlow
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